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THE CO-OPERATIVE COOPERS OF MINNEAPOLIS.

It is now almost twenty years since Dr. Albert Shaw, with something of pride in the progressive and self-reliant spirit shown by the workingmen of the city of his residence, described,¹ among other co-operative enterprises in the North-west, the rise and progress of the co-operative movement among the coopers of Minneapolis. This has long been looked upon as the most conspicuous and successful example of productive co-operation in the United States. It is proposed in the following pages to relate the history of the movement since 1886.

It will be remembered that the first experiment in co-operation among the Minneapolis coopers was made in 1868 by four journeymen, and that it was discontinued on account of a temporary stoppage of the flour mills after a few months of successful operation. In 1870 a similar experiment was made, again successful while it lasted, for about two years, but was brought to an end by the duplicity of the treasurer of the concern, who captured

¹In the *Publications of the American Economic Association*, vol. i. No. 4, reprinted in the Johns Hopkins *University Studies*, Sixth Series, 193-243.

the contracts secured for the co-operators, and started on an independent career as a "boss" cooper. About this time changes in the milling process, especially those brought in by the use of the roller for grinding and of the middlings purifier for separating the product, were introduced into the Minneapolis mills. These changes soon revolutionized the milling industry everywhere, and caused the industry at Minneapolis, which was at the door of a great region producing hard spring wheat especially adapted to the new process, to go forward by leaps and bounds. In 1870 the product of the mills was less than 200,000 barrels of flour. By 1873 this amount was trebled, and by 1880 the production had reached 2,051,840 barrels. The result of this expansion of the milling industry was to invite large numbers of coopers to the city. More came than could be regularly employed; and, as a means of saving themselves from the evils of the competition that followed, a group of sixteen journeymen in 1874 started what proved to be the first permanently successful co-operative enterprise among the barrel-makers of Minneapolis,—the Co-operative Barrel Manufacturing Company. From that time till 1886 many similar shops were started, some of them doomed from the beginning to an ephemeral existence, others destined to a more or less successful but brief career, and then to absorption by the stronger shops. Dr. Shaw in 1886 described the seven surviving shops engaged in the manufacture of flour barrels and one engaged in making tight cooperage.

When the description was given, the outlook for co-operation in the "North-west" was very bright, and for the coopers especially so. In twelve years the co-operative plan of making barrels had so far displaced the "boss" plan that two-thirds of all the men employed in the industry were in the co-operative shops. These shops had proven financially successful, their credit was high, their

property was constantly increasing in value, their business was expanding. The success of co-operation was still further demonstrated by its promotion of habits of thrift, temperance, and steadiness in the workmen. The industry seemed especially adapted to democratic control; and the co-operators, being themselves laborers, were not subject to the trials and losses arising from labor disputes. Moreover, the industry upon which their own was dependent was an expanding one, and promised to continue so. It was not unnatural to conclude, therefore, not only that the co-operative shops would become an increasingly important factor in that milling centre, but that the co-operative plan of production would be rapidly extended to other milling centres as well.

Some of the general conditions of success have remained favorable. Minneapolis has grown rapidly and solidly. From a village of 2,500 in 1860, it had already become a flourishing town of 13,000 in 1870. A decade later it had a population of 47,000, in 1890 one of 165,000, and in 1900 a little less than 203,000. This growth has had a bearing upon the success of the co-operative cooper companies, since the increase in the value of the real estate purchased has been an important factor in the gains of the more prosperous of them. The milling industry of the city has continued to expand beyond all expectation.¹ But there

¹ For convenience of reference, the following table, showing the output and the direct exports from the Minneapolis mills for a series of years, is given. The figures are derived from the *North-western Miller*:—

	<i>Output, bbls.</i>	<i>Exports, bbls.</i>		<i>Output, bbls.</i>	<i>Exports, bbls.</i>
1878 . . .	940,785	107,185	1892 . . .	9,750,470	3,337,205
1879 . . .	1,551,790	442,600	1893 . . .	9,377,635	2,877,275
1880 . . .	2,051,840	799,440	1894 . . .	9,400,535	2,370,756
1881 . . .	3,142,970	1,181,322	1895 . . .	10,581,635	3,080,935
1882 . . .	3,175,910	1,201,630	1896 . . .	12,874,890	3,717,265
1883 . . .	4,046,220	1,343,105	1897 . . .	13,635,205	3,942,630
1884 . . .	5,317,670	1,805,875	1898 . . .	14,232,595	4,052,585
1885 . . .	5,221,245	1,834,545	1899 . . .	14,291,780	4,009,135
1886 . . .	6,168,000	2,288,500	1900 . . .	15,082,725	4,702,485
1887 . . .	6,574,900	2,650,000	1901 . . .	15,921,880	3,897,905
1888 . . .	7,056,680	2,197,540	1902 . . .	16,260,105	3,410,405
1889 . . .	6,088,865	1,953,815	1903 . . .	15,581,805	3,080,610
1890 . . .	6,988,830	2,107,125	1904 . . .	13,652,735	1,741,120
1891 . . .	7,877,947	3,038,065			

has not been an increase in the cooperage business corresponding to the great growth in the production of flour. In fact since 1890 there has been scarcely any increase in the production of barrels. In that year 3,124,000 barrels were required to pack the 45 per cent. of the flour that went into wood; in 1895 only 26 per cent. was packed in wood, requiring but 2,718,000 barrels; in 1900 but 21 per cent. was packed in wood, requiring 3,215,000 barrels. The largest annual production was that of 1901, when 3,451,000 were turned out. Since then the demand has fallen to about that of 1890. At present about 20 per cent. of the flour is packed in barrels, and the percentage is likely to decrease rather than increase.¹

A number of causes have conspired to produce this stationary condition of the flour-barrel industry. The most important of these is the increased cost of barrel stock without a compensating economy in production. The oak staves formerly thought to be necessary have practically disappeared from the market, elm staves taking their place. Hickory hoops have been largely displaced by "patent" coiled hoops cut from the same wood. But the supply of elm has been constantly growing shorter through the increasing draughts made upon it not only for barrel stock, but for furniture as well. No satisfactory substitute has been found for it, though Southern gum has been used with some success for staves, and birch is beginning to be freely employed. A limited use of wire hoops has also tended to check the rising prices for coiled

¹The following table, compiled by Mr. F. J. Clark, of the *North-western Miller*, shows the number of barrels sold by all the Minneapolis shops and the percentage of Minneapolis flour packed in wood for a series of years:—

	<i>Barrels sold.</i>	<i>Per cent.</i>		<i>Barrels sold.</i>	<i>Per cent.</i>
1889	2,617,990	40.3	1897	3,158,035	23.0
1890	3,123,945	44.7	1898	3,250,835	23.0
1891	2,612,470	33.2	1899	3,312,590	23.2
1892	3,404,545	34.0	1900	3,214,965	21.3
1893	3,095,505	33.0	1901	3,450,605	22.0
1894	3,061,935	32.5	1902	3,343,710	21.0
1895	2,718,125	26.0	1903	3,129,360	20.0
1896	3,386,460	26.3	1904	2,836,520	20.7

elm hoops. As lately as 1896, however, elm staves were selling at \$6 to \$6.50 per M., patent hoops at \$6.50 to \$7 per M., heading at $3\frac{1}{2}$ to $4\frac{1}{2}$ cents per set, and eight-hoop flour barrels were selling at 28 to 30 cents each. By 1899 elm staves had risen to \$8 or \$8.50 per M., patent hoops had gone up to \$11 or \$12 per M., and barrels were selling for 37 cents. Successive advances in the price of stock have forced the price of barrels within the last two years as high as 45 cents, and they are still selling at 42 or 43 cents. Not only is the price high, but, owing to the expense of storing large quantities of barrels, the frequent shortages in the supply of stock, and other causes, the supply of barrels cannot always be depended upon by the millers when an extraordinary demand is made upon it. Moreover, the cost of handling and packing is greater for wood than for sacks, except when small sizes of sacks are used.

The Minneapolis millers, therefore, have long discouraged buyers from having their flour packed in wood. But they cannot refuse to pack it in that form as long as the buyer is willing to pay the difference charged,—a difference that ranges from 10 cents to 20 cents per barrel according to the size and material of the sack used. So much some classes of buyers are willing to pay rather than surrender an established method of purchase. The small dealer finds the barrel a convenience in selling out small quantities. Bakers in some localities prefer the barrel because of the protection it affords against rats and mice. Even the millers prefer it for storage purposes; and, when shipments are made by lake, the barrel is the most serviceable kind of package. Buyers are the more willing to use it, since they are in part recouped for the extra expense by selling the second-hand barrel. In fact, it is often said that all that keeps the industry going is the demand for second-hand barrels for packing vegetables, fruit, and

even flour in some of the Eastern mills, and for other purposes. The coopers anxiously scan every proposed change in the method of making or marking the barrels, such as stamping the hoops, to ascertain its probable effect on the sale of the second-hand barrel. Two or three years ago, when some Eastern trade journals began a crusade against the use of second-hand packages, ostensibly in the interest of cleanliness, but really in the supposed interest of the coopers and the manufacturers of stock, those speaking for Western interests immediately pointed out how damaging such an agitation would be to the Western trade, which was kept alive largely by the practice that was being attacked.¹ In a word, it is in what is generally regarded as a stationary industry, if not a decaying one, that the most persistent effort at co-operation in the United States has been made. If the experiment has not become all it promised in 1886, the facts recited will help to explain the reason why.

Of the seven co-operative companies existing in 1886, but three survive. These are the Co-operative Barrel Manufacturing Company, organized in 1874, the North Star Barrel Company, organized in 1877, and the Hennepin County Barrel Company, organized in 1880. Of the other shops described by Dr. Shaw, the Phoenix Barrel Company, started in 1881, was the first to succumb. This shop had never put in machinery; and, when in 1888 it met with a serious loss by fire, it dissolved, 18 of its 30 members going to the Hennepin Company and a few to each of the older companies. The president of the Phoenix at the time of its dissolution is now, and has for some years been, the president of the Co-operative Barrel Company. The Minnesota Barrel Company, which started

¹The *North-western Miller*, April 2, 1902. See also articles by Mr. F. J. Clark in the *North-western Miller*, November 15, 1899, and in the *National Coopers' Journal*, May, 1904.

in 1884, failed in 1890 through "poor management and factional strife within the membership." The exit of the Acme Barrel Company in 1896, after a career of ten years, was a stormy one. It suffered from a fire in the latter part of 1895, and the majority of the 43 members decided upon rebuilding on a larger scale than before. It seems that a minority regarded this procedure as unwise, and that overtures were made by them to the other shops to block the plan, provided they should be taken care of by those shops. The plan was blocked temporarily by an injunction secured on the ground that the condition of the market would not warrant the use of the company's funds in rebuilding, especially on so large a scale as was proposed; and, after several weeks of strife, the company was dissolved, nearly half of the men accepting employment in the other co-operative shops, and most of the others going to West Superior to form a co-operative shop at the instance of stock manufacturers,—an enterprise that soon failed. The North-western Barrel Company, formed in 1881, conducted a successful business till 1896. Then, owing to severe competition, it was induced to consolidate with the Hennepin, the whole of the 36 members being added to the membership of the latter company. The Twin City Barrel Company, started in 1886 for making tight cooperage, seems never to have developed into any importance. The co-operative store organized about the same time, which seemed to indicate a tendency of co-operation to bud out in various directions, was continued about four years and then went down, involving its members in considerable loss. The reasons assigned for failure are not new in the annals of co-operative enterprises. Too many wanted to be general manager and too few paid cash, too many clerks and too little capital and trade, and, withal, a lack of loyalty. All the \$2,400 of capital invested was lost; and the president and the manager, who had bor-

rowed \$500 on their personal credit to keep the company up for a time, lost that besides.¹

Other barrel companies organized on the co-operative plan have had, since 1886, their entrance and their exit. An interesting example, because it stands alone in many respects, is that of the National Barrel Company, formed in 1895 among the employees of the Hardwood Manufacturing Company, operating one of the "boss" shops. Fifty-five men formed a company on the co-operative plan, paid the Hardwood Company so much per barrel for the stock consumed, the use of the buildings, machinery, etc., and, after selling the barrels to the mills, took the surplus for their wages. The plan seems to have been organized more in the interest of the employing company than of the coopers, who, though nominally receiving the union scale of wages, are understood to have received a net wage somewhat lower than that in consequence of assessments made to cover losses at various times. The arrangement did not work very smoothly, but was continued till two or three years ago, when the Hardwood Company introduced additional machinery, which displaced a large number of coopers.

The two most important undertakings in recent years, however, are those of the Flour City Barrel Company, started in 1897, and the Cataract Barrel Company, started in 1901. Both of these companies were regarded by the older shops as unwelcome invaders of a field that had become in some way their own. The Flour City Barrel Company was started with 16 or 18 members, and the number was later increased to 20. It used a rented building, and until the year before its dissolution in 1902

¹ About the only case in which co-operation has shown itself among the barrel makers, other than in their regular business, in recent years, is that of the formation of a "Mutual Benefit Association" during the nineties by a portion of the members of the Co-operative Company. The association paid sick benefits at the rate of \$5 per week up to 13 weeks. No fixed schedule of assessments was established, calls being made upon the members only when a benefit was to be paid. The association was kept up for ten years, but has been discontinued.

remained a hand shop. When, in 1900, a disastrous fire occurred on its property, efforts were made by the other shops to secure the dissolution of the company on the basis of giving employment to the members in the other shops. But, instead, during the next year the membership was increased, 5 to 10 journeymen were employed, and in December, 1901, machinery was installed with a view to enlarging the output. In February of the same year the Cataract Barrel Company had organized on the co-operative plan with 12 members. The output of the Minneapolis shops was greater for the year than in their history before or since; but the price of barrels fell off a cent during the year, and early in 1902 was forced down a cent and a half more, to 36½ cents, without any substantial change in the price of stock. This is what had been predicted when the Cataract Company was formed. From the beginning it had trodden a thorny path. Not only did the existing companies seek to secure its withdrawal; but the same end was sought by the local coopers' union, of which the new co-operators were members, and from which they were soon expelled on the ground that their continuance in business would compel the employers to cut down wages, and that the action of the new company was, therefore, prejudicial to the interests of the union. The Cataract men then secured a new charter, and started a union of their own; but, when they sought admission to the Minneapolis Trades and Labor Council, their old companions attempted, though in vain, to keep them out. As prices declined in the early part of 1902, efforts were renewed by the barrel manufacturers to get rid of their troublesome competitor. One project was to bring about the consolidation of the company with the Flour City Company.¹ Another was to give employment to the men in the other shops; but this was rejected, the men demanding mem-

¹ The *National Coopers' Journal*, June, 1902.

bership in the co-operative companies as a condition to disbandment.¹ At length, however, the troublous career of this company, as well as that of the Flour City, was brought to a close by the action of the milling concern to which they chiefly sold their product. A dispute had risen between the Cataract Company and the Hardwood Company as to the proportion of barrels to be supplied by each, when in June, 1902, the milling company announced that thereafter it would take its whole supply of barrels from the Hardwood Company. This brought the Cataract Company to an abrupt end, and supplied the conditions necessary for successful negotiations with the Flour City Company, which now agreed to retire, on condition that its machinery should be bought and the members should be employed by the other companies. The policy adopted towards these two companies seems to show the existence of the theory that, in consequence of the solid position attained by the present shops, Minneapolis is not to be considered an open field for future co-operative enterprises in the making of flour barrels.

It might be inferred from the fact that attention has been fixed upon the failure of so many co-operative enterprises that the movement as a whole has been a failure. This inference, however, can hardly be drawn from the facts. The mortality among the co-operative shops has been little, if any, greater during the past twenty years than among the private shops. In 1886 there were seven co-operative shops, and now there are only three; but in 1886 there were four private shops (shortly before there had been five), and now there are but two. The aggregate net assets of all the co-operative companies reported in 1886 were about \$150,000, of which \$118,000 belonged to the three companies now remaining. These three companies now have assets amounting to something over \$160,000. In the matter of membership there

¹The *North-western Miller*, April and May, 1902.

has been a decided falling off. The total membership in 1886 was 324, of which 201 (in October of that year) were in the three companies now existing. These figures, it should be said, moreover, show a sharp decline as compared with the membership of 1885,—a decline due to a bad business year and to the further introduction of machinery in some of the shops. The three companies have now an aggregate of 146 members, and the future will probably see a still further decline. Judged by the output, the co-operative shops have held their own. There are no returns to show the production by companies in 1886; but, according to Dr. Shaw, the co-operative shops at that time employed two-thirds of the men engaged in the industry, and it is probable they produced about that proportion of the barrels made. In 1904 they produced nearly three-fourths of the output.¹

The increase of output and decrease of membership carries with it a suggestion that the companies have become less co-operative than they originally were, and this seems to be the case. The co-operative companies began with "hand" shops, not indeed of the older type, where staves and heading and hoops are all fashioned by the cooper,² but of the type where the machine-made stock was worked up entirely by hand. It was about 1874 that one of the private shops in Minneapolis introduced machinery. It was eight years later that the first

¹The *North-western Miller*, March 15, 1905. The following table shows the number of barrels made for the last five years by each of the two co-operative companies furnishing the present writer data:—

Year.	<i>The Co-operative Bbl. Mfg. Co.</i>	<i>The North Star Bbl. Co.</i>
1900	638,232	716,756
1901	750,347	690,715
1902	577,993	651,567
1903	623,093	662,898
1904	618,956	618,319

²In the early days of co-operation in Minneapolis the hickory hoops, then universally employed, were usually made by the coopers, who split them from the poles and shaved them during slack times. The introduction of the flat hoop, therefore, lessened the amount of work to be done by the coopers. Even before the flat hoop was generally adopted, however, manufacturers had found that the higher freight charge on poles nullified the advantage coming from making the hoops in the shop.

of the co-operative companies, the Hennepin, put in machinery, and another three years before the North Star and the Co-operative Barrel Company became (1885) machine-shops. The machinery introduced at this time consisted of three pieces, the power windlass for drawing together the staves left spreading at one end when placed in the two truss hoops, which hold them together at the other end; the trussing machine, used for pressing the heavy truss hoops to their proper places preparatory to driving on the permanent barrel hoops; and the crozing machine, which chamfers the ends of the barrel, and cuts the groove for receiving the head. The displacement of a large amount of hand work involved in the use of these machines was resisted as long as possible by the co-operative companies, for they were composed of men whose chief interest lay in the employment of the skill they had acquired. When the machines were introduced, there was necessarily a reduction of membership. Thus, in 1884, the North Star had 80 members; in 1886, the year following the setting up of the machines, but 65. During the same time the membership of the Co-operative Company was reduced from 120 to 90. Whenever it has become necessary to increase the membership, as in the process of getting rid of a competitor, the problem has soon presented itself of getting rid of the increase. The Hennepin Company in 1896 absorbed the Northwestern, increasing its membership from 60 to 96, but within two years 30 had withdrawn, and the number has since been reduced to 57. The use of machinery has compelled the employment of a larger proportion of non-members than before, for it is only coopers that have been admitted to membership. Nearly half the men in the Hennepin shop are non-members: about one-third of the wages paid by the Co-operative Company goes to outsiders. In the North Star 30 non-members are reg-

ularly employed, only 3 or 4 of them coopers; and in busy seasons the company employs 25 or 30 journeymen additional. It is clear, therefore, that the character of the undertaking has been considerably modified by the enforced use of machinery.

The relations between the co-operators and their employees do not differ materially from those existing between employer and employed elsewhere. Journeymen, when employed, are given the same wages as the members. It is true that during the period of activity of the Knights of Labor the co-operative coopers were members of that order, and that in the early nineties they went into the Minneapolis local of the International Coopers' Union along with their own employees and those of the "boss" shops. But their position was from the first an anomalous one, since it gave them the power to control the wage scale they had to pay on the one hand, and, on the other, to dictate in many matters to their competitors the conditions of employment. More or less dissension rose in the union, and finally the members of the Co-operative Company and of the North Star secured a charter for a separate union. The Hennepin Company remained in the original union with the employees of their competitors. When in the fall of 1902 the chief one of these competitors put into his factory machinery which changed greatly the conditions of employment, the Union Committee, which went to secure an adjustment of the difficulties that soon arose, had upon it a member of the Hennepin Company and also the president of the union, who was an employee of the Hennepin Company,—a situation which very naturally had its effect in bringing on a strike in the private shop. A year later, during the long strike of the mill hands, the Hennepin Company came into conflict with the union because as a manufacturer it undertook to nail the linings in barrels,—work which had been done before

in the mills by the members of the Packers' and Nailers' Union, which was affiliated with the Coopers' Union. The Hennepin shop was placed on the "unfair" list, and its members finally suspended from the union. About the same time the Union composed of the members of the other two co-operative companies was deprived of its charter, an action no effort was made to check. The conflict of interests between the co-operators and the journeymen was again shown in 1903, when the latter sought to secure an eight-hour day. The co-operative shops did not fancy this method of "making work" any more than the private shops did, and they succeeded in killing the movement. In a word, in dealing with employees, whether organized or not, the co-operative companies have been influenced by much the same considerations as other employers are.

Another incident that indicates that the movement is losing something of its co-operative character is found in the change adopted by one of the companies in the method of dividing the earnings. All the companies started with the plan of apportioning "gains and losses pro rata upon the wages received by each member," except those from hired help and from the sale or manufacture of stock,¹ which were to be apportioned equally among the members. In the early nineties the North Star discontinued the use of wages as a basis for the division of any part of the earnings. The explanation of the change is as significant as the change itself. "It's money makes the business go, not the men," said an officer of the company. "We can get all the men to work we want." The officers of the other companies feel by no means sure that the North Star's plan is not the right one. They seem to maintain

¹ The Co-operative Company twenty years ago owned a plant in Wisconsin for the manufacture of barrel stock, but the venture did not turn out well and it was discontinued. In the early part of 1904 the company started a factory at Frederick, Wis., for the manufacture of heading, with a capacity of 3,000 pairs per day. This company and the North Star each secured timber lands in Oregon to provide for a future supply of stock, but this supply has not yet been drawn upon.

their old scheme of division not from principle, but from inertia. The surrender of this characteristic of co-operation leaves the North Star really nothing but a joint stock company of 40 members owning the stock in equal amounts.

We may thus feel some regrets that the movement of which so much was expected twenty years ago has in some respects failed. It has not extended its benefits to large groups, but, on the contrary, has constantly narrowed the number enjoying them. It has not served as an encouragement to other and varied enterprises in the same direction, and has failed to develop and has perhaps lost something of what the writers call the "co-operative spirit." Yet, even though we may be disposed to regard the coopers as associations of producers organized to exploit laborers for a profit rather than as associations of workingmen organized to secure the profits of their own labor, it must still be admitted that the movement has been attended with encouraging success. For more than a quarter of a century the experiment of considerable groups of men employing their own labor and directing it in a purely democratic way, as among the members, has been carried on with financial success. Just what their gains have been it is impossible to say, nor is it so important to know. The pioneers started with very little, and they have accumulated in their business the value of their shares, ranging from \$1,000 to \$1,250, and most of them have become the owners of their homes and of other property besides. A few years ago, says a correspondent, when a bank in the neighborhood of one of the co-operative shops failed, "everybody was surprised to learn how much money many of the members had in the institution." In fact there is every indication of prosperity in the business and of thrift among the members.

But, as Professor Gide has said in speaking of the French co-operators: "To set a money value upon the benefits

of co-operation is to judge it by unimportant consequences. The co-operative workmen do not judge it thus. At least they do not make an increase of income the chief end of their efforts. What they have sought above all else is independence and security." The coopers mean the same thing when they say that the greatest advantage for them in co-operation lies in permanence and regularity of employment. And this they have gained. The membership of the companies is remarkably permanent, changes being but rarely made. The control which the men have over the conditions of their own employment has made it possible for them to protect themselves to a large extent against the out-of-work evil which, under private control, inevitably exists in the trade. Whereas formerly "a man's berth was his store-room," the co-operative companies, to secure regularity of employment in a trade that runs to seasons, have as a policy enlarged their storage capacity beyond what pure profit-making considerations would warrant. During dull seasons such outside coopers as they have are, of course, laid off, and the members may have to work on a stint; but they rarely have to stop work. Moreover, all observers agree that one effect of the movement has been to improve the character of the men. The high character of the men in the companies to-day is, no doubt, in large part due to the training which participation in such an undertaking yields, but also in large part to the sobering influence of increasing age and to the weeding out of those who had not the qualities for taking risks and meeting discouragements. When men are called upon, as these sometimes have been, to pay as assessments \$5 per week out of a \$7 wage for an indefinite period, the weak-hearted are likely to surrender their berths.

Again the movement has encouragement in it because it shows that democratic control does not necessarily involve dishonesty, insubordination, or the incompe-

tence that comes from frequent changes in office. In the history of all the societies during a period of thirty years it is said that not a dollar has been lost through the dishonesty of officials. While the rules provide for the discipline of unruly members, they seem rarely to have been put into force. The members have learned that efficient management cannot be had with frequent changes of officials. "At first," said one member, "everybody wanted to be president, and the board of managers was changed frequently. But it was soon found that it cost too much to educate a man." The policy in all the companies now is, and has been for some time, to re-elect the officers year after year. The president of the North Star has held office for thirteen years and the secretary for twelve years. The president of the Co-operative Barrel Company took office twelve years ago and the secretary fourteen years ago. While the president of the Hennepin has served consecutively only four years, the secretary has served almost continuously for twenty-one years.

It must be said, however, that the co-operative companies are now facing a crisis somewhat like that they had to meet in the eighties, and in many ways a more dangerous one. Within the past two or three years the private shops have introduced new machinery that seems to be successful for heading and hooping the barrel automatically. This machine leaves practically nothing for the cooper to do. In one shop, that of the Minneapolis Coöperage Company, where 32 coopers had been employed, all but 6 have been displaced by the "hooping-off" or "heading-up" machine, as the new device is called. In the other private shop in Minneapolis a similar reduction has occurred. The Hennepin Company, which had been the first of the co-operative shops to introduce machinery twenty years ago, promptly put in a "heading-up"

machine, the invention of one of its members. But it was soon taken out, partly because it did not work perfectly, but partly, also, according to one of the officers of the company, because of opposition shown by the members. The interest of the co-operators as working-men shows itself here quite clearly. Their interest does not lie primarily in introducing economies into the trade, but rather in perpetuating old conditions of production that will insure the employment of their acquired skill. If they are compelled to put in this new machine, as they probably will be, to meet the competition of their rivals, their future seems very doubtful indeed. They will not be able to use their skill as coopers; and, being mostly middle-aged or old men, they cannot run the machines in competition with the young men and boys employed by the boss shops. It might be possible to save the co-operative character of the companies, if the members had that at heart, by taking in the machine-men, who have always been excluded from membership. This would, of course, introduce new factors into the problem of co-operative success, which has hitherto been kept comparatively simple in consequence of the simplicity of the process of production, the picked membership of the companies, and the perfect equality among the men as far as the kind of work done is concerned. There seems no disposition at present to face the new difficulties that would be involved in the admission of such new material. The more probable course seems for the coopers, recognizing themselves as victims of a very common incident of industrial progress, reluctantly to allow their skill to go to the scrap-heap, as they would an antiquated machine, contract the membership still further, and for those remaining to give place as active workers to younger men, and rest content with being earners of profits.

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